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CLAIMS:

What is claimed is:

1   1.   A set of data processing systems operating utilizing a
2   single set of input devices, comprising:
3   a single set of input devices including a pointing
4   device;
5   at least two data processing systems sharing the single
6   set of input devices, each data processing system having a
7   logical display area logically arranged to have at least one
8   boundary in common with a display area for another data
9   processing system, wherein a pointer driven cursor
10   controlled by the pointing device is located within a
11   display area for an active data processing system receiving
12   input signals from the single set of input devices; and
13   switching means, responsive to movement of the cursor
14   past a logical common boundary between two display areas,
15   for automatically switching transmission of signals from the
16   single set of input devices from the active data processing
17   system to another data processing system corresponding to a
18   display area sharing the logical common boundary with the
19   display area for the active data processing system, wherein
20   the other data processing system becomes the active data
21   processing system.

1   2.   The set of data processing systems of claim 1, wherein
2   the at least two data processing systems further comprise:
3   an array of data processing system displays, each data
4   processing system display corresponding to a different data
5   processing system having a logical display area.

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3. The set of data processing systems of claim 1, wherein the switching means further comprises:

a universal serial bus connection of the single set of input devices to each data processing system.

4. The set of data processing systems of claim 1, wherein the switching means further comprises:

a input controller connecting the single set of input devices to each data processing system, wherein the active data processing system signals the input controller to switch transmission of input signals upon detecting movement of the cursor across the logical common boundary shared by the display area for the active data processing system and the display area for the other data processing system.

5. The set of data processing systems of claim 1, wherein the switching means further comprises:

a input controller connecting the single set of input devices to each data processing system, the input controller configured to identify logical common boundaries between logical display areas and calibrated with respect to each logical display area and signals generated by pointing device, wherein the input controller switches transmission of input signals upon detecting movement of the cursor across the logical common boundary shared by the display area for the active data processing system and the display area for the other data processing system.

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1   6.   The set of data processing systems of claim 1, further
2   comprising:
3   a logical arrangement of display areas for the at least
4   two data processing systems which corresponds to a physical
5   configuration of display devices for the at least two data
6   processing systems, wherein logical display areas for data
7   processing systems having physically adjacent display
8   devices share a logical common boundary.

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7. A method for operating multiple data processing systems using a single set of input devices, comprising:

receiving signals from a pointing device within the single set of input devices controlling movement of a cursor within a display area for an active data processing system receiving input signals from the single set of input devices; and

responsive to movement of the cursor past a logical common boundary between two logical display areas, each logical display area corresponding to a different data processing system, automatically switching transmission of signals from the single set of input devices from the active data processing system to another data processing system corresponding to a display area sharing the logical common boundary with the display area for the active data processing system, wherein the other data processing system becomes the active data processing system.

8. The method of claim 7, further comprising:

receiving signals from the single set through an input controller switching transmission of the signals between data processing systems.

9. The method of claim 8, further comprising:

connecting the data processing systems to the input controller utilizing a universal serial bus.

10. The method of claim 8, wherein the step of automatically switching transmission of signals from the single set of input devices from the active data processing system to

4 another data processing system corresponding to a display
5 area sharing the logical common boundary with the display
6 area for the active data processing system further
7 comprises:
8   switching transmission of the signals between data
9 processing systems based upon an arrangement of logical
10 display areas for the data processing systems and
11 calibration within the input controller of each logical
12 display area and signals generated by pointing device.

1 11. The method of claim 8, wherein the step of automatic-
2 ally switching transmission of signals from the single set
3 of input devices from the active data processing system to
4 another data processing system corresponding to a display
5 area sharing the logical common boundary with the display
6 area for the active data processing system further
7 comprises:
8   switching transmission of the signals between data
9 processing systems in response to a signal received within
10 the input controller from the active data processing system.

1 12. The method of claim 7, wherein the step of automatic-
2 ally switching transmission of signals from the single set
3 of input devices from the active data processing system to
4 another data processing system corresponding to a display
5 area sharing the logical common boundary with the display
6 area for the active data processing system further
7 comprises:
8   switching transmission of the signals between data
9 processing systems in response to a signal received from the

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10   active data processing system.

1   13. The method of claim 7, further comprising:
2   arranging logical display areas for the data processing
3   systems to correspond to a physical configuration of display
4   devices for the data processing systems, wherein logical
5   display areas for data processing systems having physically
6   adjacent display devices share a logical common boundary.

1   14. The method of claim 7, further comprising:
2   arranging logical display areas for the data processing
3   systems in an array of contiguous logical display areas.

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1   15.   An automatic input switching device, comprising:

2   an input controller;

3   an input connection within the input controller for a

4   single set of input devices including a pointing device;

5   output connections within the input controller for at

6   least two data processing systems;

7   switching logic within the input controller at least

8   two data processing systems transmitting input signals from

9   the single set of input devices to an active data processing

10 system,

11   wherein the switching logic, responsive to movement of

12 a cursor within the display area of the active data

13 processing system past a logical common boundary between the

14 display area of the active data processing system and a

15 display area for another data processing system, automatic-

16 ally switches transmission of the input signals from the

17 single set of input devices from the active data processing

18 system to the other data processing system corresponding to

19 the display area sharing the logical common boundary with

20 the display area for the active data processing system,

21 wherein the other data processing system becomes the active

22 data processing system.

1   16.   The automatic input switching device of claim 15,

2   wherein the switching logic switches transmission of the

3   input signals from the single set of input devices from the

4   active data processing system to the other data processing

5   system in response to a signal received from the active data

6   processing system.

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17. The automatic input switching device of claim 15,
wherein the switching logic switches transmission of the
input signals from the single set of input devices from the
active data processing system to the other data processing
system based upon an arrangement of logical display areas
for the data processing systems and calibration of each
logical display area and the pointing device.

18. The automatic input switching device of claim 15,
wherein the output connections further comprise:
     output connections to a plurality of data processing
systems each having a logical display area, wherein the
logical display areas are arranged in a contiguous array
corresponding to physical positions of display devices for
the data processing systems, wherein display areas for data
processing systems having adjacent display devices share a
logical common boundary.